The ADVENTURES OF ZACK & MAX

Mady goes to England

VOLUME 3

ICOM

About the story

We set out to cover in this third volume one of the five basic principles of amateur radio service in the United States. The summarized versions of these principles are (1) emergency service, (2) goodwill, (3) development of new technical ideas, (4) operating practice, and (5) recruitment of new amateur radio operators.

In volume number 1 "The Adventure Begins"; we introduced what ham radio is all about. In volume number 2 "Lost In Seattle"; the radio practices for emergency service were presented. In volume 3 "Mady Goes to England"; goodwill is the theme.

Our team is comprised of a group of Icom America Inc. employees; the kids of the Lake Washington Ham Club, KC7OIO, at Franklin Elementary School in Kirkland, Washington; Icom U.K.; and The Priory L.S.S.T. School in Lincoln, England.

Early on in the project, our good luck omen, Jannah, walked through the door of Mr. Condon's 4th grade class at Franklin Elementary. Being from England, Jannah offered us the basic starting information for the story. She told us about daily routines and answered basic questions about life in the U.K. Our next piece of good luck came from an advertisement Ian Lockyer of Icom U.K. posted on the net. He was looking for a school in England that wanted to jointly write this comic book. In response to the advertisement we were connected with Mr. David Mackinder, a radio teacher, and his students at The Priory L.S.S.T. School in Lincoln, England.

Sarah Ward, KB7RWG and Jim Ward, of Saltaire, England were very helpful in giving the story line credence and a place for Mady to visit. Sarah earned her license through the KC7OIO radio-licensing program.

Mr. Condon and his school's ham club spent 3 months writing the story, planning out the scenes, and communicating with their English counterparts. The 9-to-11 year olds worked very hard putting the story together; they gave up recess time and came into class before school. They posted their work to computers and passed scripts back and forth from Kirkland to Lincoln. More than just stories were exchanged. Friendships were started, and even a Max the pig made it to England. The ham club members at Franklin Elementary even met Sarah when she came from the U.K. to visit!

Finally, after the story was submitted, Kayoko Nakajima, a professional cartoonist living in the Seattle area, again brought the Zack, Max and Mady characters to life.

There are so many people to thank for working on this project. We would like to acknowledge the writers and administrators, teachers, Icom staff, and Hams who made this possible. We hope you enjoy reading this as much as we enjoyed creating it.

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Acknowledgements

U.S.

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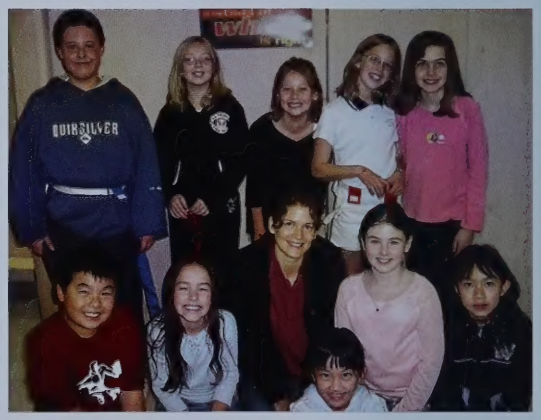


Acknowledgements

U.K.

Mr. Burks, deputy headmaster, The Priory L.S.S.T. School
Mr. Lockyer, Icom U.K.
Mr. Mackinder, teacher, The Priory L.S.S.T. School
& Students: Charlotte, Heather, Mia, and Nikiwe
Mrs. Ward, G/KB7RWG
Jannah Harrison, visiting student

Pictures show from top to bottom: the U.K. writing team with their teacher, Mr. Mackinder, the U.K. team with Max the pig, the U.S. team with Sarah Ward, and the U.S. team with their teacher, Mr. Condon.

Here's where you can learn more about IRLP (Internet Radio Linking Project):

A great general resource for understanding IRLP can be found at:
http://www.irlp.net
All repeater information was taken from this site.

More information can also be found on the ARRL Web site:
http://www.arrl.org/qst/2003/02/VoIP.pdf

ARRL offers a few printed publications that include information on IRLP. One is the (annually updated) ARRL Repeater Directory. For more information about this publication, check out:
http://www.arrl.org/catalog/?item=9191

Beginning with the 2004-2005 edition, The ARRL Repeater Directory includes listings for U.S., and Canadian repeaters that serve as IRLP nodes.

ARRL also offers a book called: "VoIP: Internet Linking for Radio Amateurs", by Jonathan Taylor, K1RFD. It includes more detailed technical information on IRLP. See: http://www.arrl.org/catalog/?item=9264

TravelPlus, a CD-ROM product, includes global listings for IRLP nodes:
http://www.arrl.org/catalog/?item=9256

We would also like to thank the Radio Society of Great Britain (RSGB) for providing us with information about Special Events in Great Britain and rules on third party operation. For more information about amateur radio in Great Britain, see:
http://www.rsgb.org.uk/

Here's where you can learn more about how to become a licensed ham radio operator:

American Radio Relay League (ARRL)
www.arrl.org
1-800-32NEWHAM

The ARRL provides information for anyone interested in amateur radio. Through books, tapes, maps and a list of ARRL-affiliated ham clubs, you will be able to find the answers to all your questions about amateur radio.

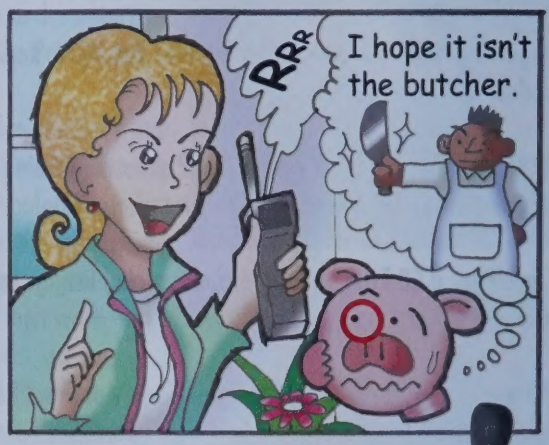
Gordon West Radio School
1-714-549-5000
E-mail: wb6noa@arrl.net
Gordon West teaches evening ham radio classes and offers weekend ham radio licensing seminars on a monthly schedule.

Here's where you can learn more about amateur radio and where to purchase Icom radios in the U.S.:

Icom America Inc.
www.icomamerica.com

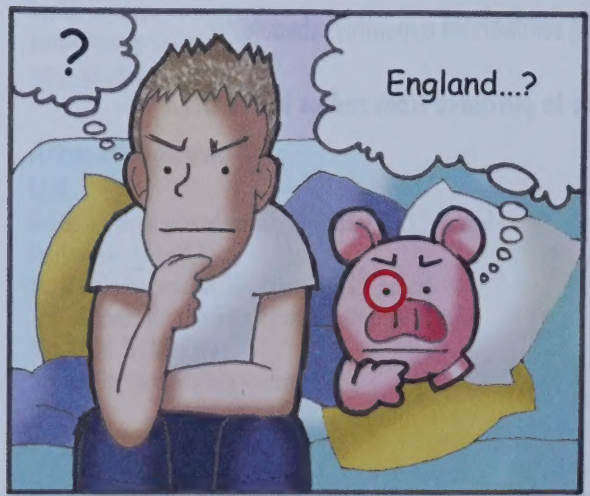
I am so glad we found Max. It would've been terrible if we had lost him.
I was really worried for a while.
Oink Oink Oink

It's your move.
!


RRR
I hope it isn't the butcher.

Oh Yes Aunt Sarah, I would love to stay with you in England!

Zack, Max, I'm GOING TO ENGLAND!
I going to get to see double-decker buses, royalty, old castles, and drink tea!

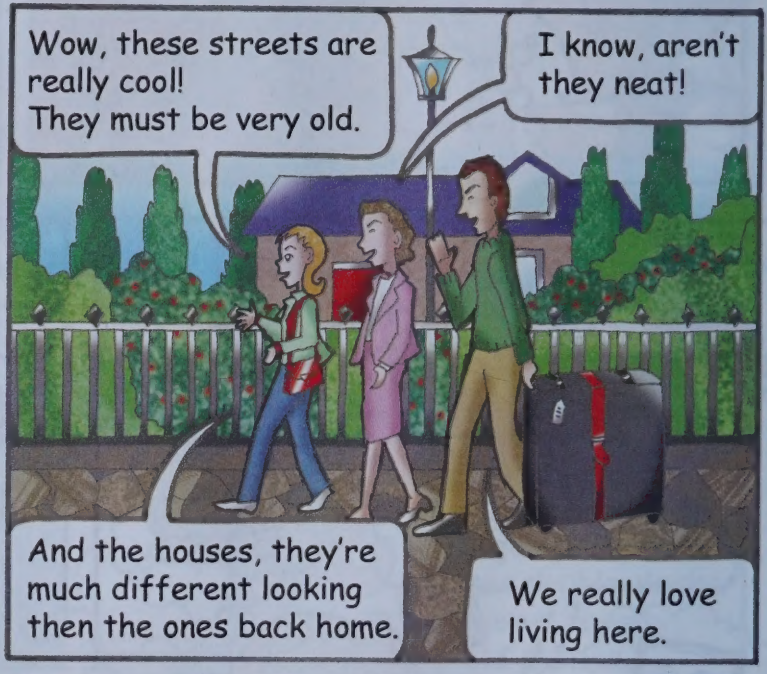

?
England...?

...
Who is "England", maybe a BIG PIG?
Hi!

no BIG PIG...
What's a matter with you two? Aren't you happy for me?
...
Well, why aren't you two happy for me?
Mady, we're going to miss you!
I need to pack my T90A and take it with me.
Bye!
Good-bye, Mady!
Squeak Squeak

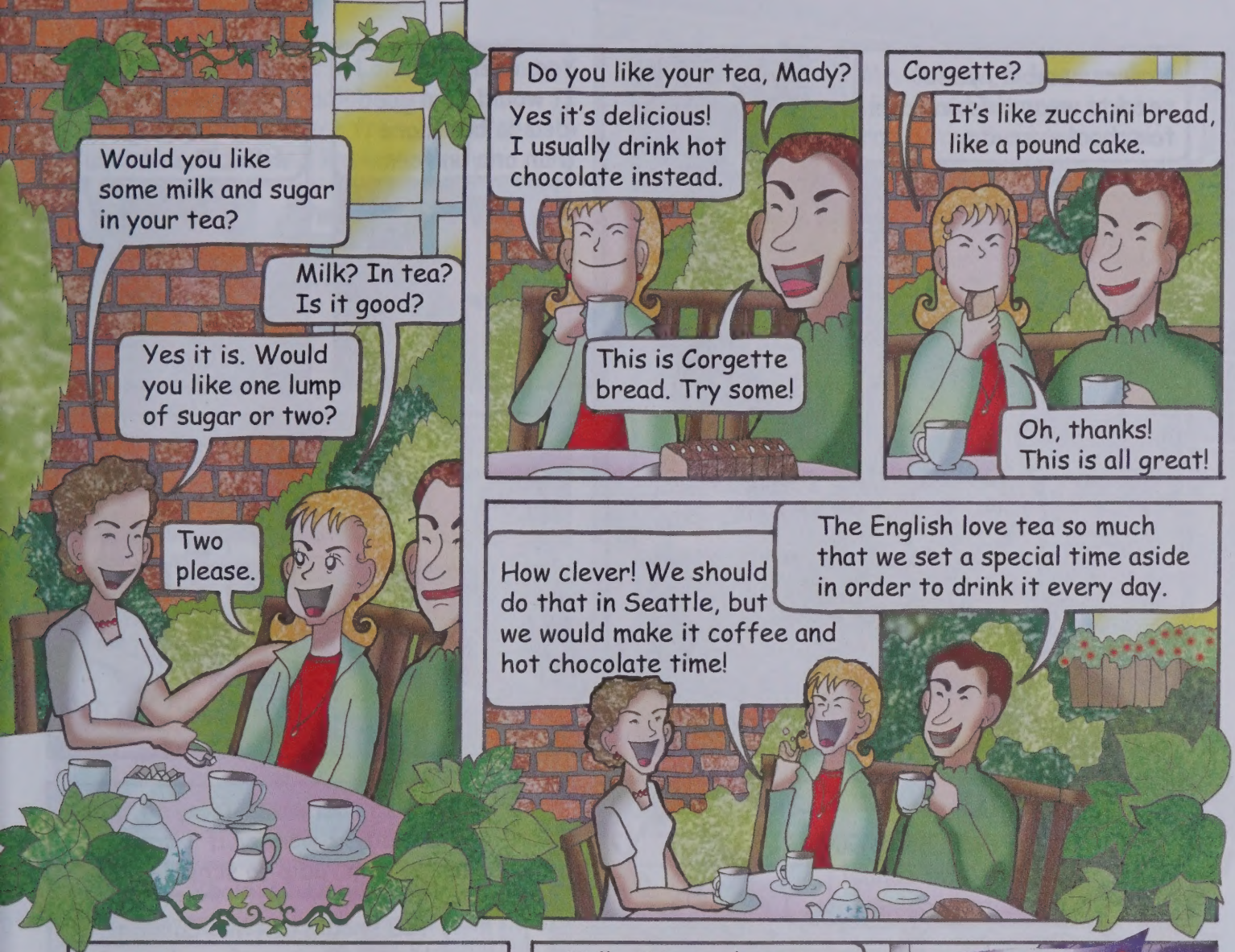
Welcome to England!
Hi, Mady!

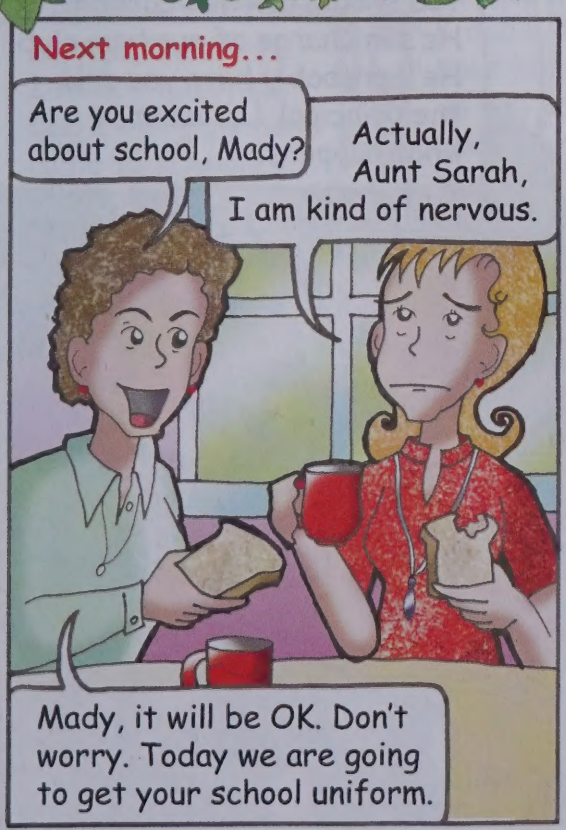
London
Saltair
Oh, Mady, you're finally here!
I'm glad to be here, too. I've missed you!
We hope you really enjoy your stay!

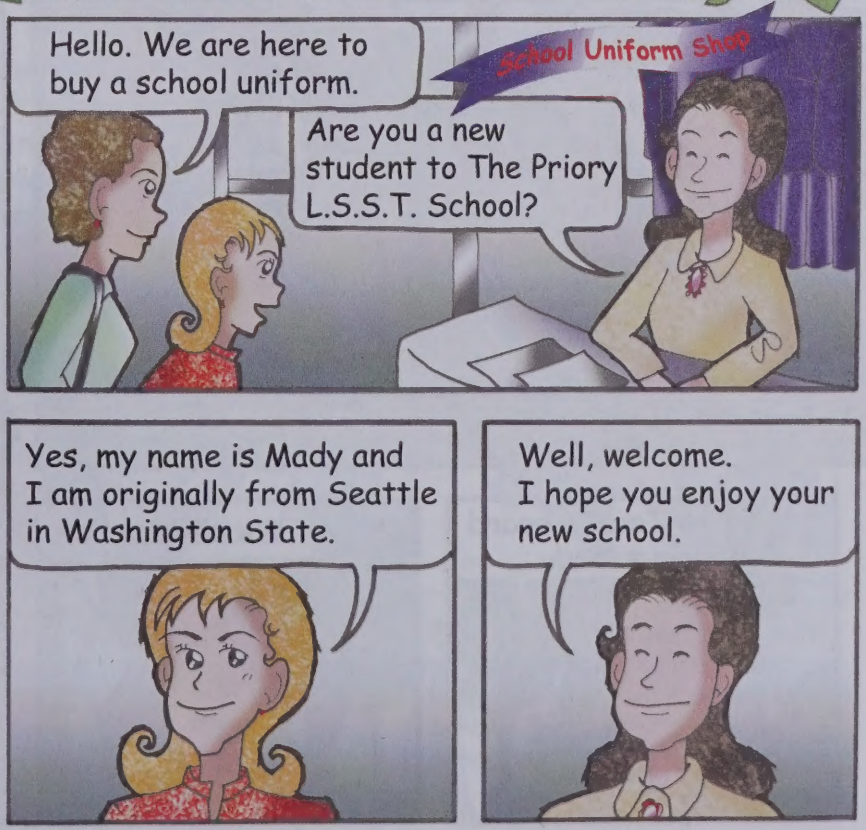

Wow, these streets are really cool! They must be very old.
I know, aren't they neat!
And the houses, they're much different looking then the ones back home.
We really love living here.

Here we are, Mady. This is our house.
It's so pretty! It looks like something out of a storybook.

Let's go in. You must be tired. We can have a spot of tea in the back garden.
Tea? That sounds great!


Would you like some milk and sugar in your tea?
Milk? In tea? Is it good?
Yes it is. Would you like one lump of sugar or two?
Two please.
Do you like your tea, Mady?
Yes it's delicious! I usually drink hot chocolate instead.
This is Corgette bread. Try some!
Corgette?
It's like zucchini bread, like a pound cake.
Oh, thanks! This is all great!
How clever! We should do that in Seattle, but we would make it coffee and hot chocolate time!
The English love tea so much that we set a special time aside in order to drink it every day.


Next morning...
Are you excited about school, Mady?
Actually, Aunt Sarah, I am kind of nervous.
Mady, it will be OK. Don't worry. Today we are going to get your school uniform.


Hello. We are here to buy a school uniform.
School Uniform Shop
Are you a new student to The Priory L.S.S.T. School?
Yes, my name is Mady and I am originally from Seattle in Washington State.
Well, welcome. I hope you enjoy your new school.

Now remember, you'll need to wear this uniform to school everyday.
I have to wear this everyday?
Yes, everyday. It would be a good idea to buy more than one uniform.
That sounds like a plan. We'll buy two outfits to begin with...Thanks.
...
Back in the U.S.
Hey, Trevor! Sara! Guys! I can't believe school has started again!
I sure wish there was a way to talk to Mady. I wonder if I can bring my ham radio to school?
You should ask Mr. Condon. He's in charge of our ham club. He'll probably have you ask the principal. Let us know what happens.
!
Hi Zack! I heard about Mady....
We all miss her.

My Uncle Matt lives in London right now and is doing some radio research. Mady might even hear from him if she uses her radio! And knowing Mady...

She will!

Let us know how it all works out!

Jr.Highschool

KC7010

Mr. Condon, I was wondering if I could bring my ham radio to school tomorrow.

Well, Zack, it's OK with me, but you are going to have to check with the principal, Ms. Cronin.

Hey, Zack! What's up?

Hi, Ms. Cronin. I have a question. Can I bring my ham radio to school?

Well, Zack, since you are trained to help in case of emergency, I don't see why you can't bring your handheld to school. * As long as you don't turn it on during class and Mr. Condon is OK with it, then you may bring your radio to school.

Thanks Ms. Cronin!

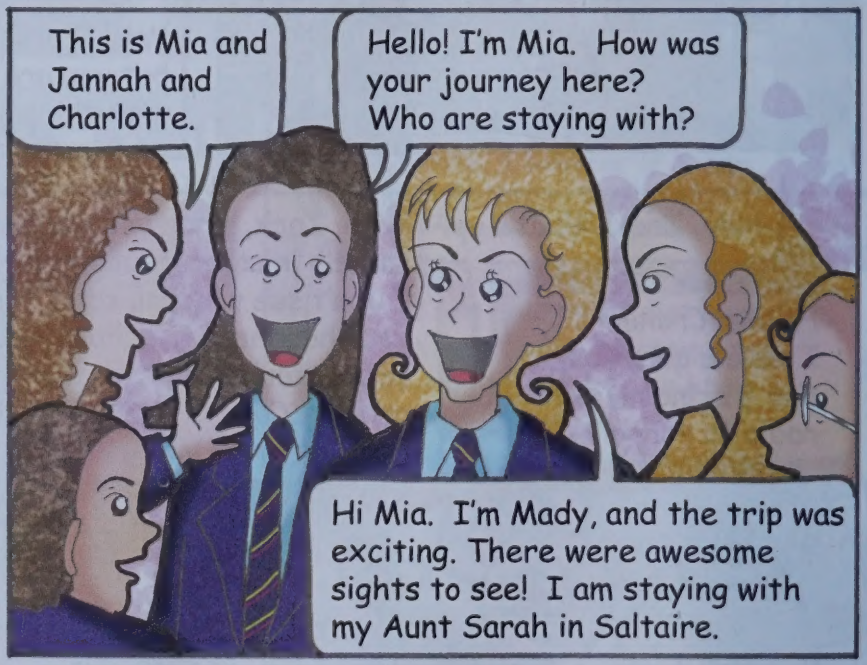
*Kids, make sure you check with your school's administration before bringing your radios to school. Rules vary from school to school and district to district.

Back in the U.K.
School starts in 10 minutes. How do you feel, Mady?
I'm a bit nervous, but I think it will be fun.
Don't worry; I'm sure you'll make lots of friends.
THE PRIORY L.S.S.T.

I hope so!
Wish me luck!

Good Luck!

Hi! You're new, aren't you? Welcome to our school. My name is Nikiwe, what's yours?
Hi Nikiwe, my name is Mady and yes, I am new to the school and England.

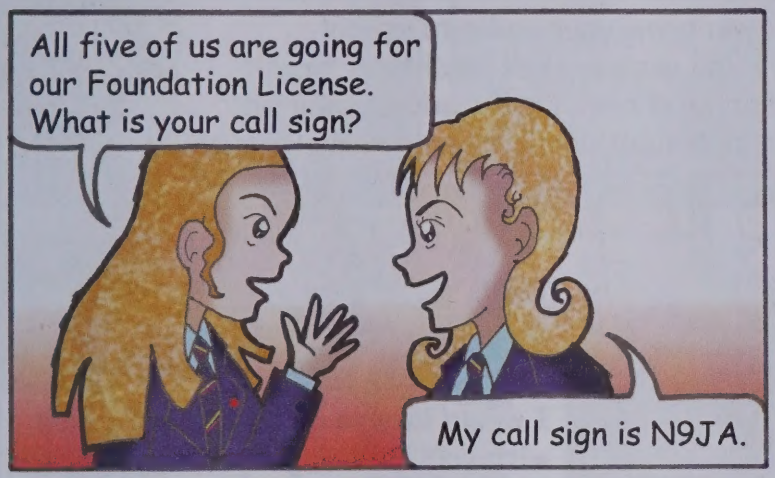

This is Mia and Jannah and Charlotte.
Hello! I'm Mia. How was your journey here? Who are staying with?
Hi Mia. I'm Mady, and the trip was exciting. There were awesome sights to see! I am staying with my Aunt Sarah in Saltaire.

Hi there, my name is Heather. What part of America are you from?
I am from Washington State. I'm visiting my Aunt Sarah.

Hello Mady! Nice to meet you. By the way, did you know our school has an amateur radio club?
Really!
I have an amateur radio license from the U.S.!

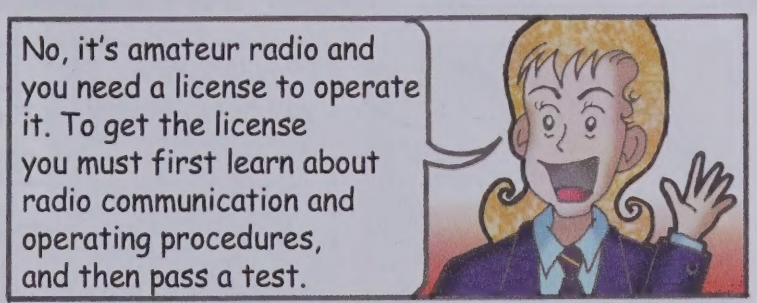
Mady, you can use your ham radio here in the U.K.
I know! I brought my T90A!

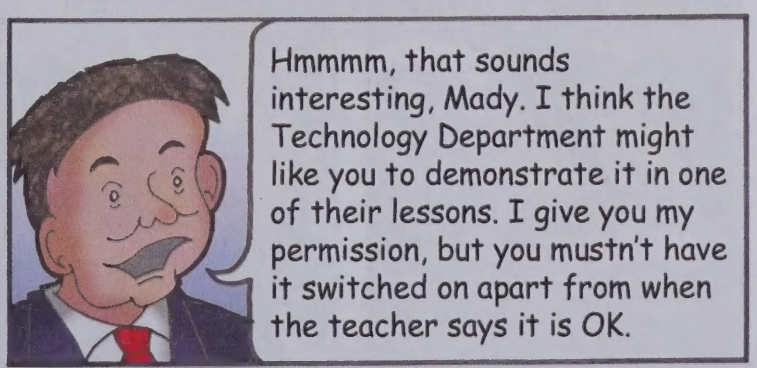
We need to ask Mr. Burks, the deputy headmaster, if you can bring you radio to school!

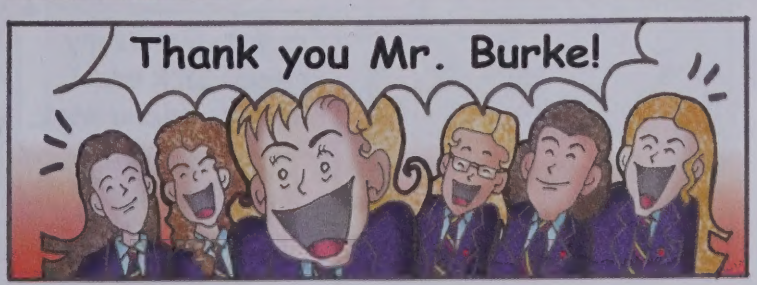

All five of us are going for our Foundation License. What is your call sign?
My call sign is N9JA.

Let's ask!

Mr. Burks would it be possible for me to bring my handheld radio to school?
What is a handheld radio, Mady? Is it like a mobile phone?


No, it's amateur radio and you need a license to operate it. To get the license you must first learn about radio communication and operating procedures, and then pass a test.


Hmmmm, that sounds interesting, Mady. I think the Technology Department might like you to demonstrate it in one of their lessons. I give you my permission, but you mustn't have it switched on apart from when the teacher says it is OK.

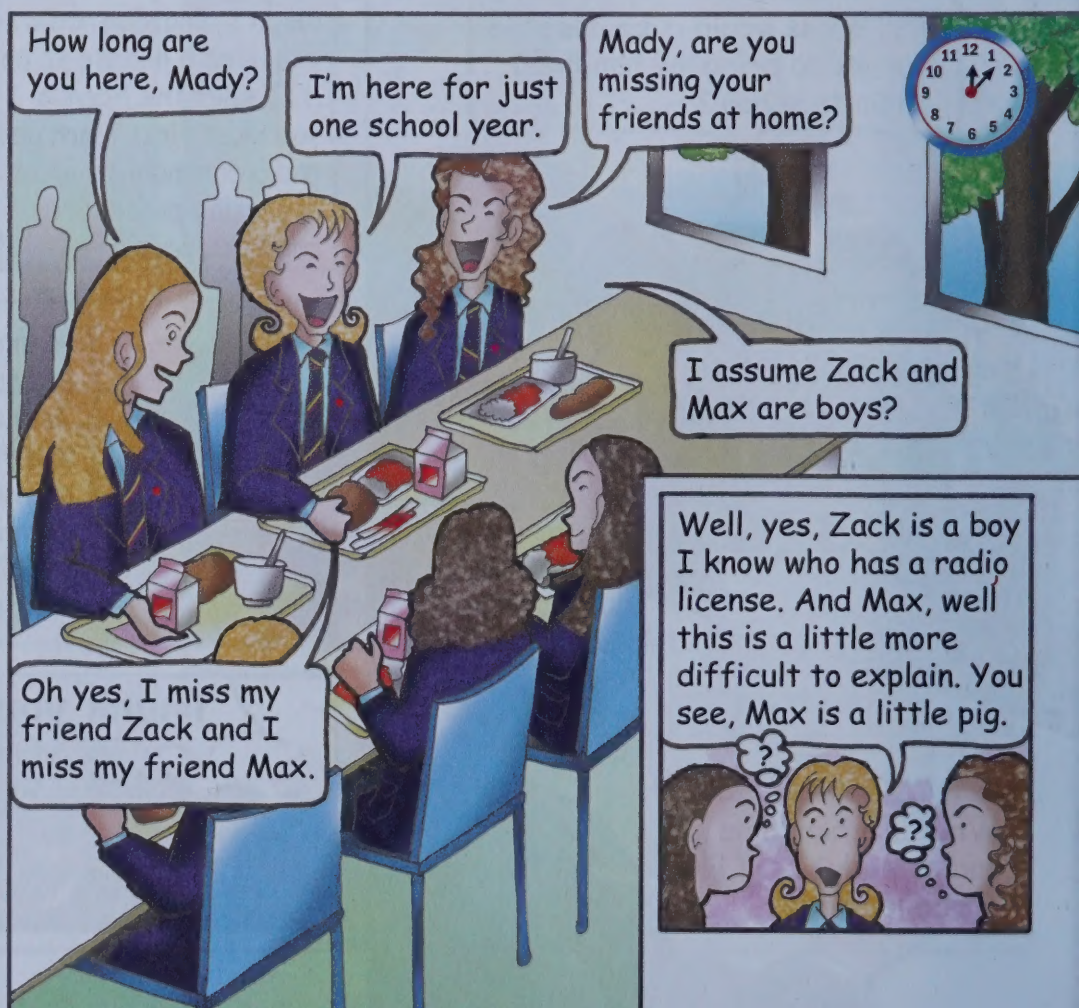

Thank you Mr. Burke!

What do you think of our school, Mady?
OH! It's so Big!
We have about 1500 pupils at our school!

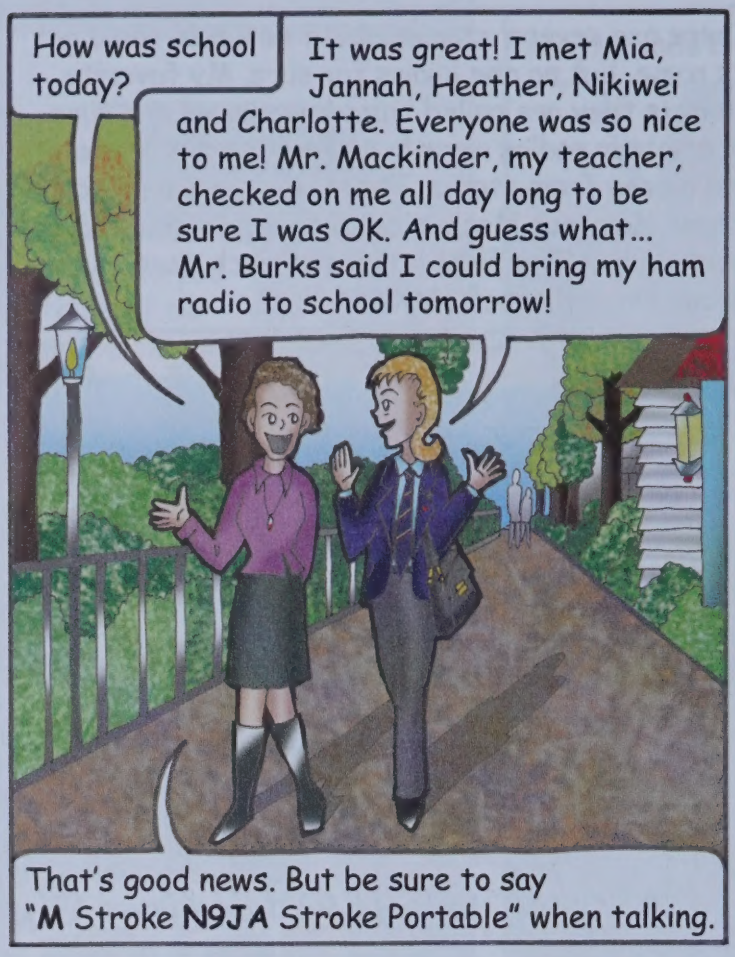
Bonjour mes ami!

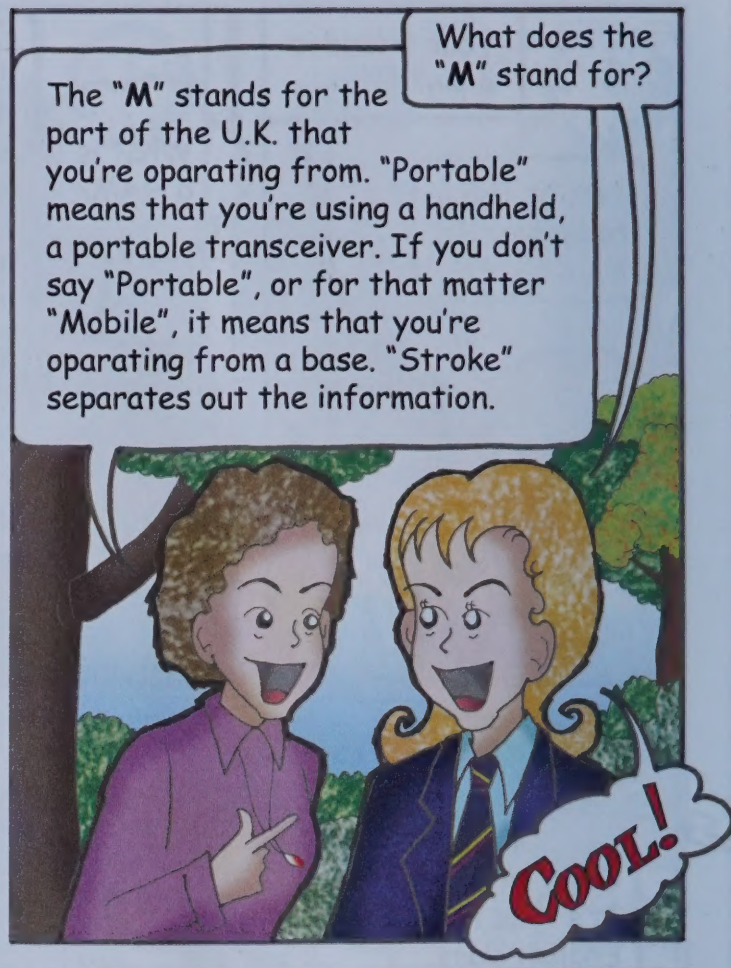
Mady, will you bring your radio to school tomorrow? You can use it at lunchtime, break times and after school. On Tuesdays when we have radio club meetings, you could come with us!
I would love to go to the radio club with you! I'll bring my T90 tomorrow.

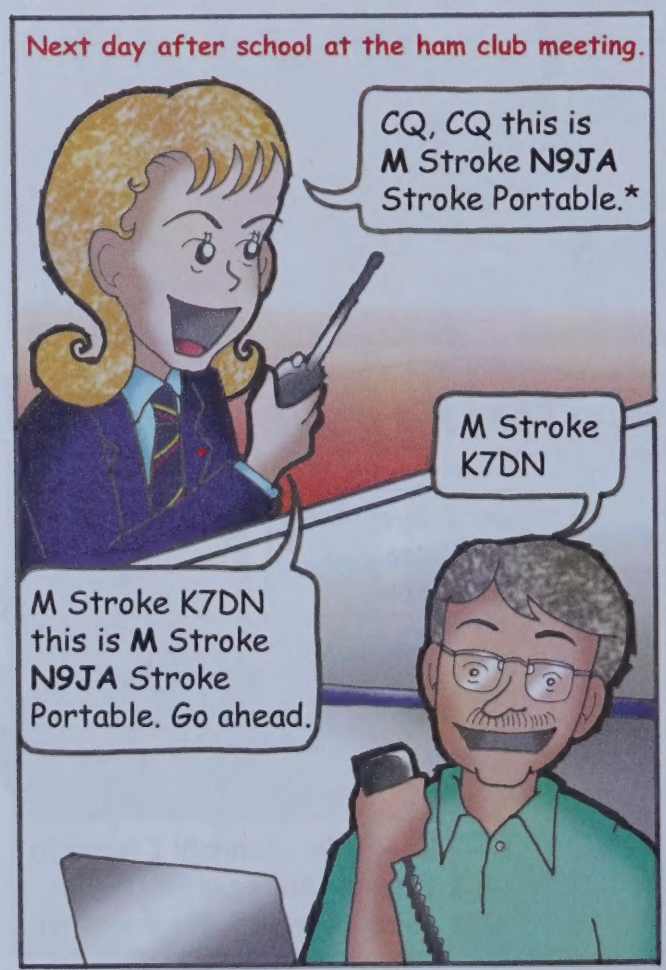
OH!

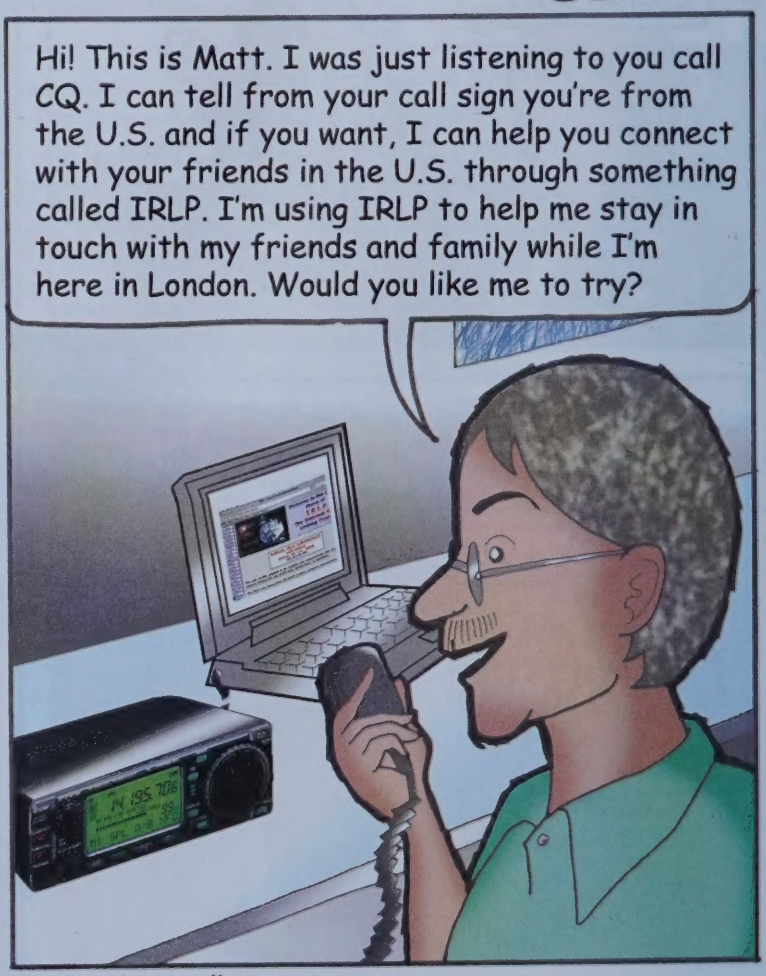

How long are you here, Mady?
I'm here for just one school year.
Mady, are you missing your friends at home?
I assume Zack and Max are boys?
Well, yes, Zack is a boy I know who has a radio license. And Max, well this is a little more difficult to explain. You see, Max is a little pig.
Oh yes, I miss my friend Zack and I miss my friend Max.

Your friend is a pig?
Yes, he is a.... radio pig...Ah, he is a HAM.
What is a HAM?
There are several stories about how ham radio got its name, but no one knows for sure. My favorite story is they are called hams because at one time all amateur radios were built from scraps of metal and pieces from stores. There was a magazine called "Home Amateur Mechanics". It used to show how to make radios. The first letters of each word in the magazines title spell HAM.
RRRringgg!!
Come on, Mady. It's time for English class.
Today our lesson starts with the whole class working on a shared text.....
a pig?
H
A
M
RRRringgg!!
Good-bye, Mady. We'll see you tomorrow!
Good-bye, Jannah! I need to find my Aunt Sarah. We're going to walk home together.


How was school today?
It was great! I met Mia, Jannah, Heather, Nikiwei and Charlotte. Everyone was so nice to me! Mr. Mackinder, my teacher, checked on me all day long to be sure I was OK. And guess what... Mr. Burks said I could bring my ham radio to school tomorrow!
That's good news. But be sure to say "M Stroke N9JA Stroke Portable" when talking.


What does the "M" stand for?
The "M" stands for the part of the U.K. that you're oparating from. "Portable" means that you're using a handheld, a portable transceiver. If you don't say "Portable", or for that matter "Mobile", it means that you're oparating from a base. "Stroke" separates out the information.
COOL!


Next day after school at the ham club meeting.
CQ, CQ this is M Stroke N9JA Stroke Portable.*
M Stroke K7DN
M Stroke K7DN this is M Stroke N9JA Stroke Portable. Go ahead.


Hi! This is Matt. I was just listening to you call CQ. I can tell from your call sign you're from the U.S. and if you want, I can help you connect with your friends in the U.S. through something called IRLP. I'm using IRLP to help me stay in touch with my friends and family while I'm here in London. Would you like me to try?

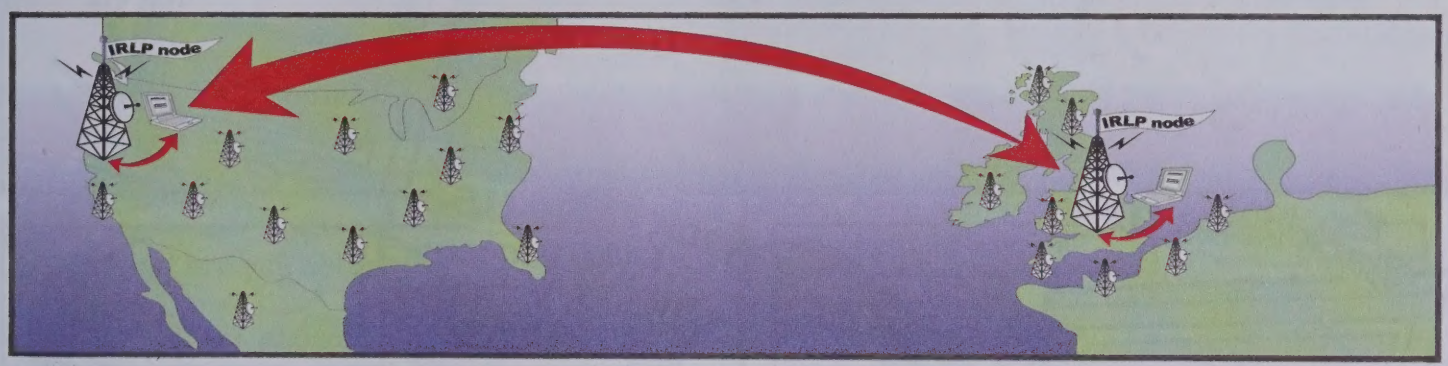
* Kids, see page 9 of Volume 1 to read about more information about call signs.

What is IRLP?

IRLP is the Internet Radio Linking Project. That means we can link repeaters over the Internet and you can talk with someone as if you were both in the same town. But I need to know where your friends are located, so I can find an IRLP "node" in their area.

What is a "Node"?

A "node" is an IRLP connected repeater like the one we are on right now!



It would be cool to be able to talk with my friend, Zack. I really miss him and worry about our friend, Max the pig, running off and getting lost! They are both in Seattle, Washington State. I'm here studying for a year while living with my Aunt.
Is there an IRLP node close to Seattle?

Thanks, Matt! I'll send an e-mail to Zack and let him know the frequency! Thanks for the information, 73, from **M** Stroke **N9JA** Stroke Portable.

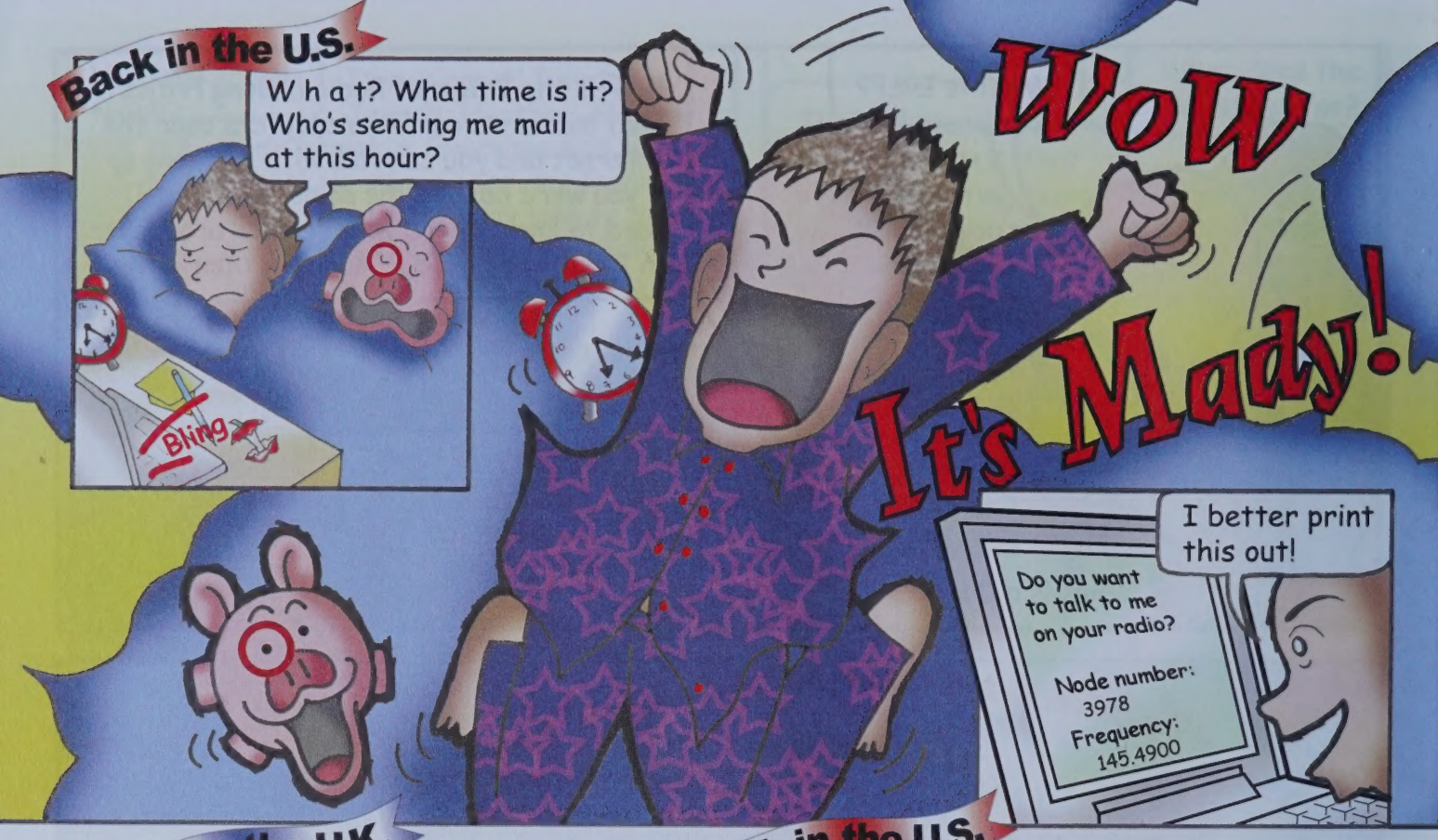
Good luck! I'll be listening to hear how it all works out! 73, from M Stroke K7DN.

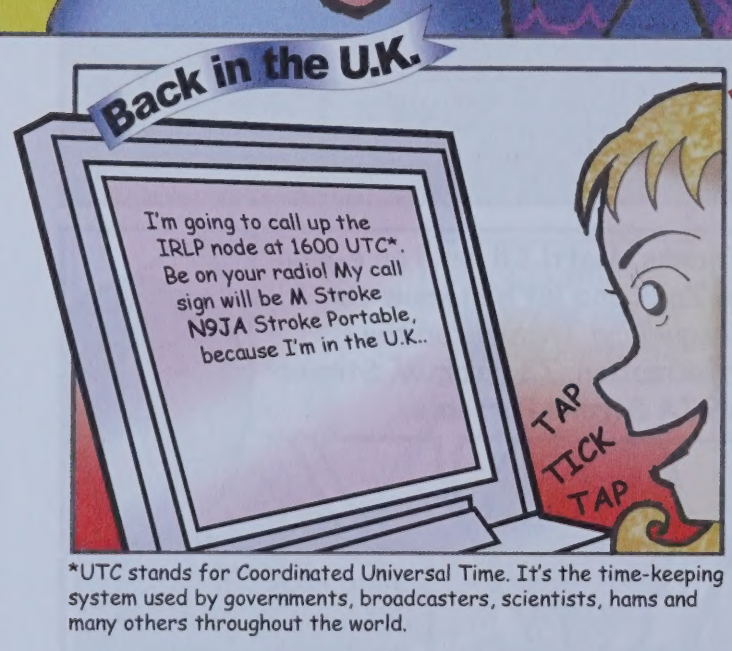
KIRKLAND, WA

Let me see here, I'll just look that up on the Internet and...yes, there are several in the Seattle area...try this one! You know, I have family in Seattle, too!

Do you want to talk to me on your radio?

TAP
TICK
TAPP

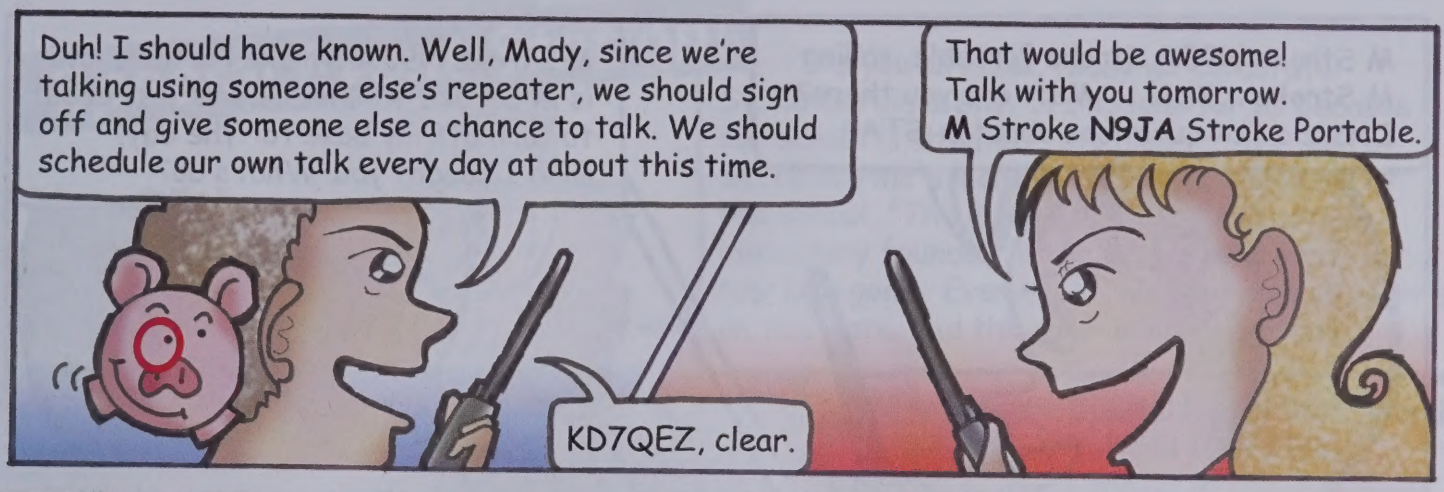

Back in the U.S.
W h a t? What time is it? Who's sending me mail at this hour?
Bling
Wow
It's Mady!
I better print this out!
Do you want to talk to me on your radio?
Node number: 3978
Frequency: 145.4900

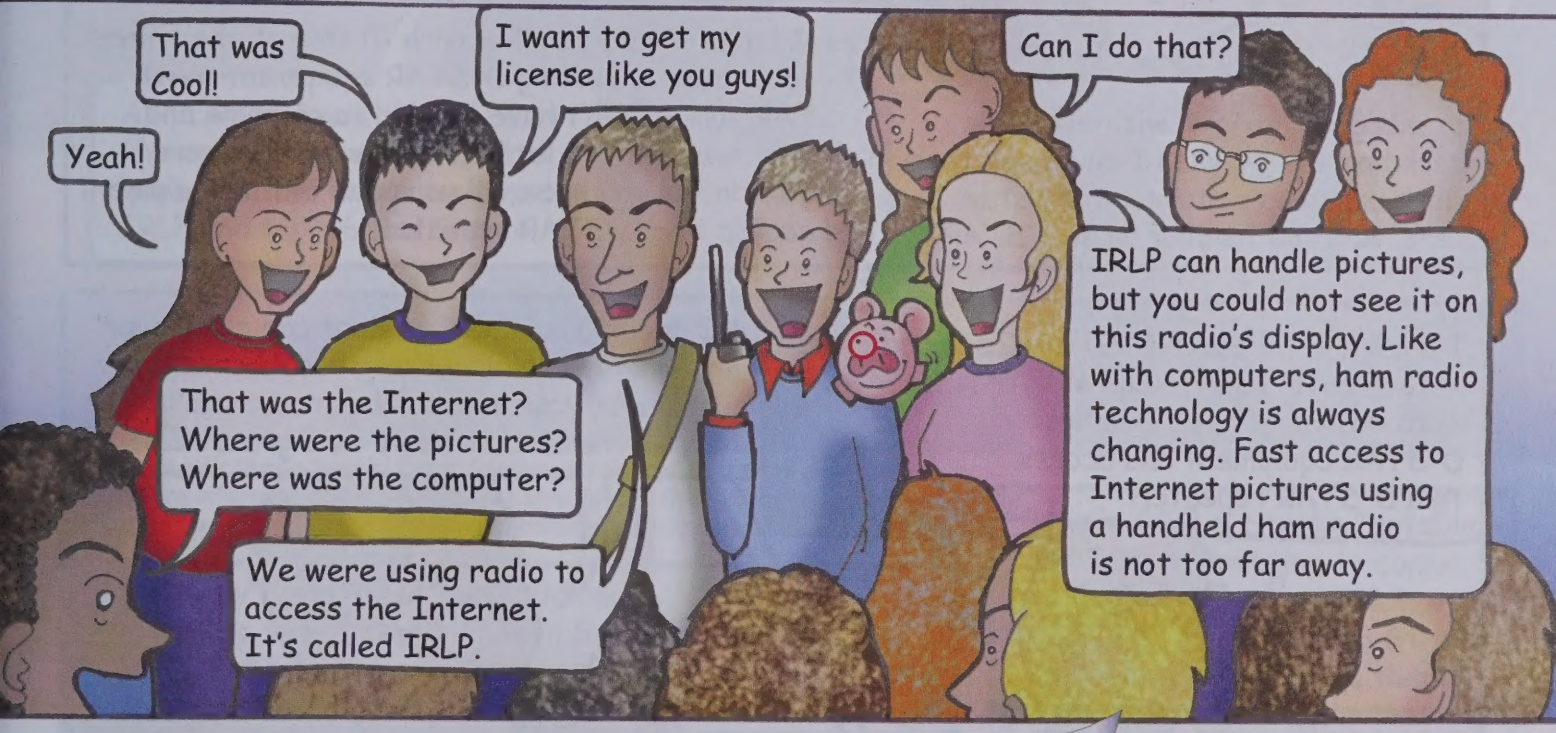

Back in the U.K.
I'm going to call up the IRLP node at 1600 UTC*. Be on your radio! My call sign will be M Stroke N9JA Stroke Portable, because I'm in the U.K..
TAP
TICK
TAP

*UTC stands for Coordinated Universal Time. It's the time-keeping system used by governments, broadcasters, scientists, hams and many others throughout the world.

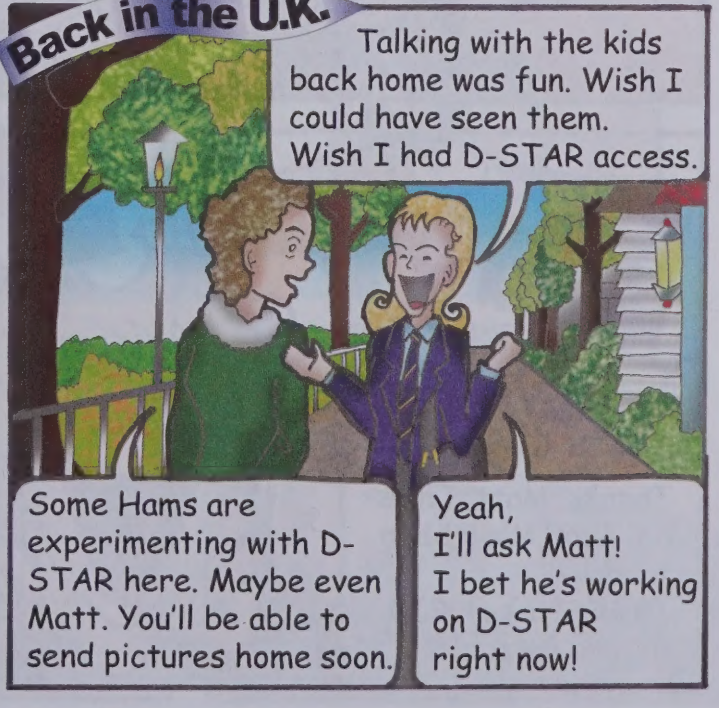
Who was that?
I think it was Zack!
U.K.
KD7QEZ from "M Stroke N9JA Stroke Portable," Zack, are you there?
U.S.
"M Stroke N9JA Stroke Portable," this is KD7QEZ, Mady! IRLP is great! Your signal is awesome!
Back in the U.S.
What are you doing!?
It's an IRLP hookup!
Mady, Sara and Trevor are here. Want to say "Hi!"?
SURE!
Hmm. IRLP. England. Could Mady have found Matt? I wonder...
This is K3OOO. Hi, Mady! Trevor and I and the gang sure miss you! Is it fun there?
Great!
Hi, Sara. I miss all of you too! Yes, it's fun here. Everything is familiar, yet different. How's your last year in Junior High?
Hi, Mady. W7TDC here. School here is going awesome. Listen, is K7DN somehow helping you with this Internet link?
...Mady?
I'm here, Trevor. Yes! K7DN IS helping me. How do you know Matt?

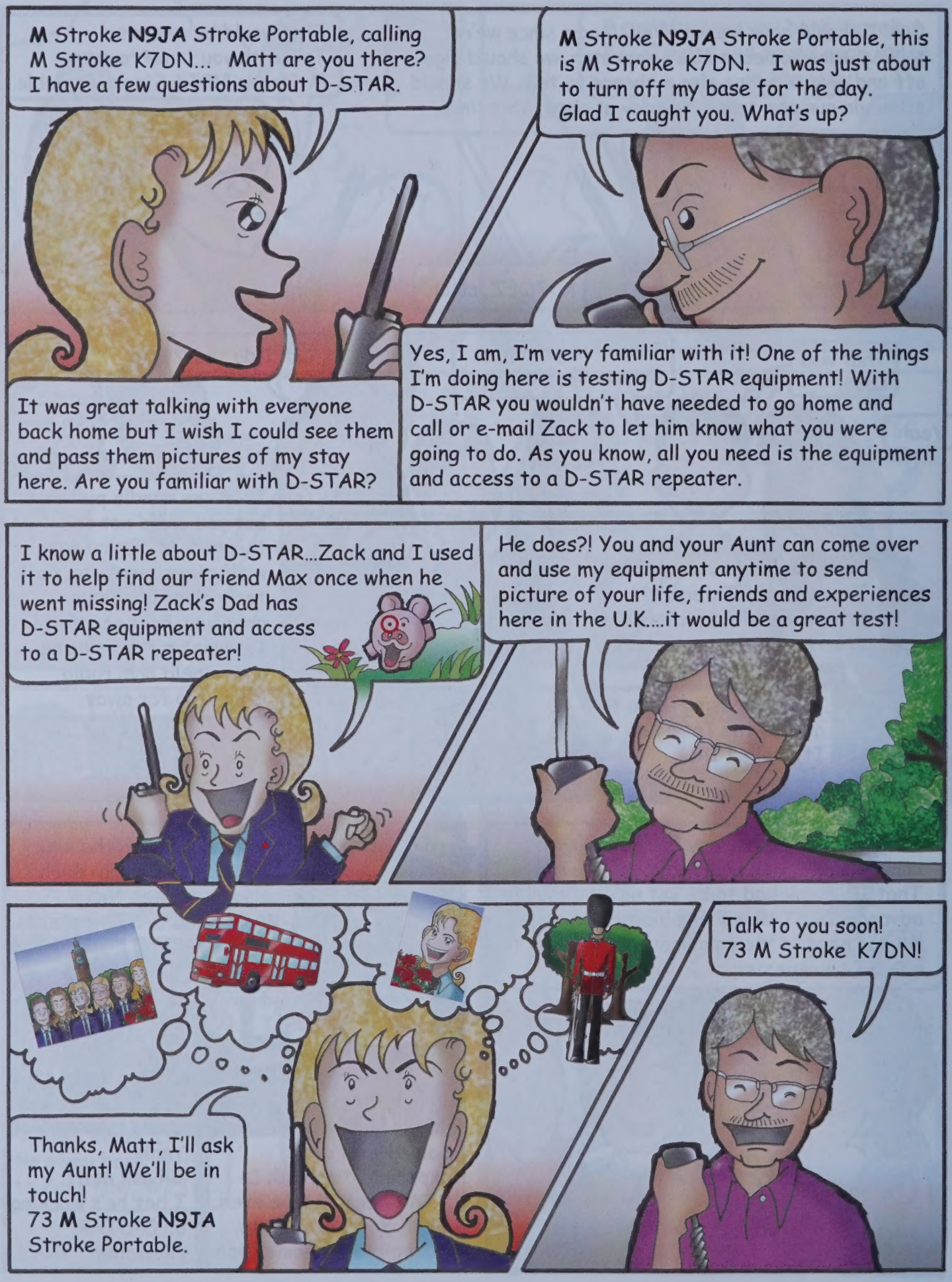
He's my Uncle!
Wha....!
I can't believe you both traveled 5,000 miles and found each other in the U.K.!
M Stroke K7DN!
Go ahead, M Stroke K7DN, this is W7TDC. That you, Matt?
It sure is, Trev. Didn't know Mady was your friend. Hi, Mady!
Hi, Matt. Glad you were monitoring.
Matt, I'd like to schedule a contact with you for 19:00, from home, same frequency. That OK with you?
Sure is Good to hear your voice, Trev. Talk with you then. You kids have fun. M stroke K7DN, out.
Thanks Mady. I'll turn you back over to Zack now, W7TDC.
Yesss!
Wow, that was neat! How do you know Matt?
We met on the air, of course.


Duh! I should have known. Well, Mady, since we're talking using someone else's repeater, we should sign off and give someone else a chance to talk. We should schedule our own talk every day at about this time.
KD7QEZ, clear.
That would be awesome! Talk with you tomorrow. M Stroke N9JA Stroke Portable.


That was Cool!
Yeah!
I want to get my license like you guys!
Can I do that?
That was the Internet? Where were the pictures? Where was the computer?
We were using radio to access the Internet. It's called IRLP.
IRLP can handle pictures, but you could not see it on this radio's display. Like with computers, ham radio technology is always changing. Fast access to Internet pictures using a handheld ham radio is not too far away.

And D-STAR technology is a new way to communicate with ham radio. It's digital. That IRLP call had to be set up by e-mail in advance. D-STAR will eliminate that step. All you need is the equipment and access to a D-STAR repeater.


Back in the U.K.
Talking with the kids back home was fun. Wish I could have seen them. Wish I had D-STAR access.
Some Hams are experimenting with D-STAR here. Maybe even Matt. You'll be able to send pictures home soon.
Yeah, I'll ask Matt! I bet he's working on D-STAR right now!


M Stroke N9JA Stroke Portable, calling M Stroke K7DN... Matt are you there? I have a few questions about D-STAR.
M Stroke N9JA Stroke Portable, this is M Stroke K7DN. I was just about to turn off my base for the day. Glad I caught you. What's up?
It was great talking with everyone back home but I wish I could see them and pass them pictures of my stay here. Are you familiar with D-STAR?
Yes, I am, I'm very familiar with it! One of the things I'm doing here is testing D-STAR equipment! With D-STAR you wouldn't have needed to go home and call or e-mail Zack to let him know what you were going to do. As you know, all you need is the equipment and access to a D-STAR repeater.
I know a little about D-STAR...Zack and I used it to help find our friend Max once when he went missing! Zack's Dad has D-STAR equipment and access to a D-STAR repeater!
He does?! You and your Aunt can come over and use my equipment anytime to send picture of your life, friends and experiences here in the U.K....it would be a great test!
Thanks, Matt, I'll ask my Aunt! We'll be in touch!
73 M Stroke N9JA Stroke Portable.
Talk to you soon!
73 M Stroke K7DN!

Special Event Station!

Nov.25th
St.Catheriners' Day
SPECIAL EVENT!
GB9LS

As you all know, today we celebrate St. Catherine's Day. It's special for us because our school is situated very close to the site of St. Catherine's monastery. Hence the name of the school, "The Priory". It was a Gilbertine monastery founded in the 12th century but is now long gone. Every year, we have special events on this date, and this year is no exception!

We will have a Special Event Station and be using the event call sign: GB9LS. The LS is short for LSST. *

All licensed hams should be at their stations, and Mady is going to start by demonstrating IRLP and talk to the States.

*This is a fictitious Special Event Station and Special Event call sign. For more information about how to set up a Special Event Station, visit: http://www.rsgb.org/licensing/specialevent/index.htm

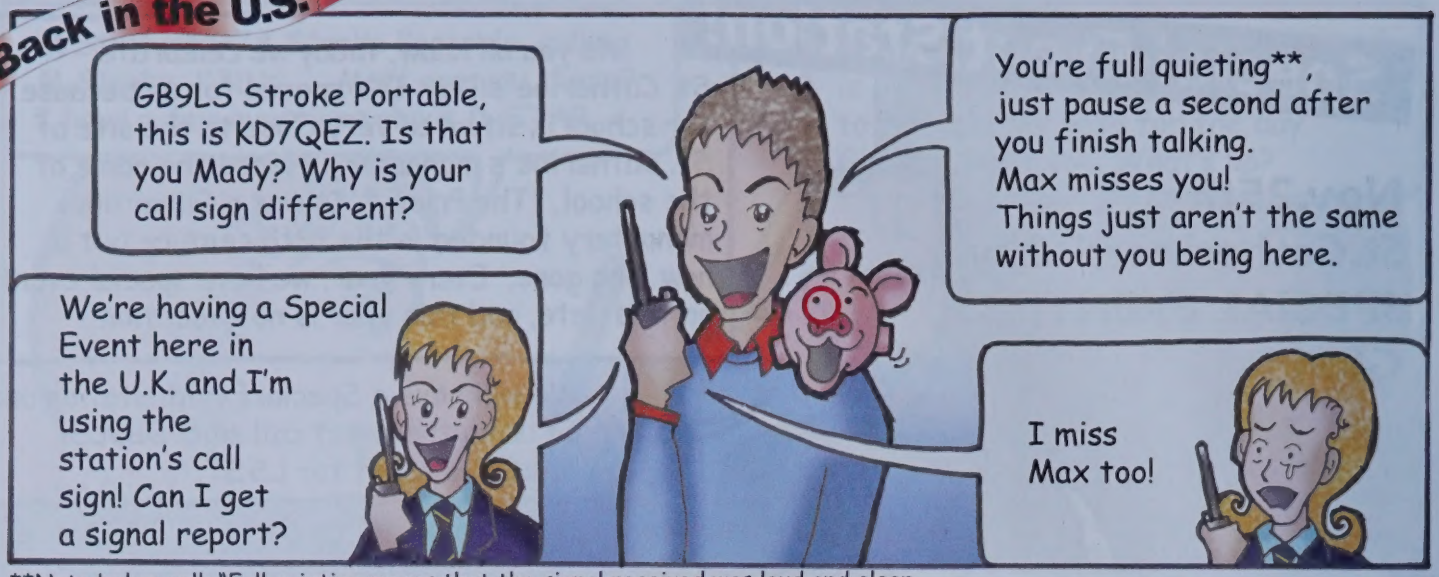
This is my Icom T90A handheld radio.
I use it to talk to my friends in Seattle using IRLP.
I'm going to try it again now.
First I'll connect to the repeater.

BZZZTT
TTZZZ
BBZZT

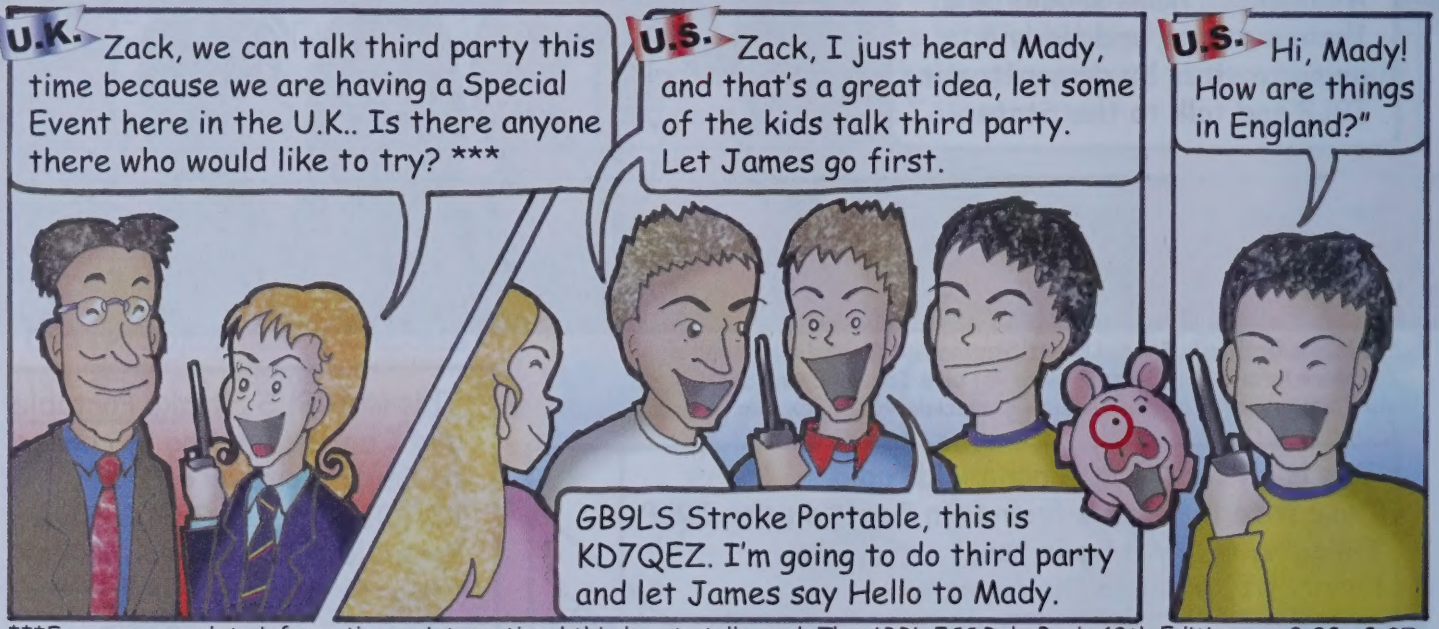
The sound you hear is telling us that we are connected to the repeater.

This is GB9LS Stroke Portable and I am attempting to connect to Seattle by way of IRLP, KD7QEZ, this is GB9LS Stroke Portable. Zack, are you there?

Back in the U.S.

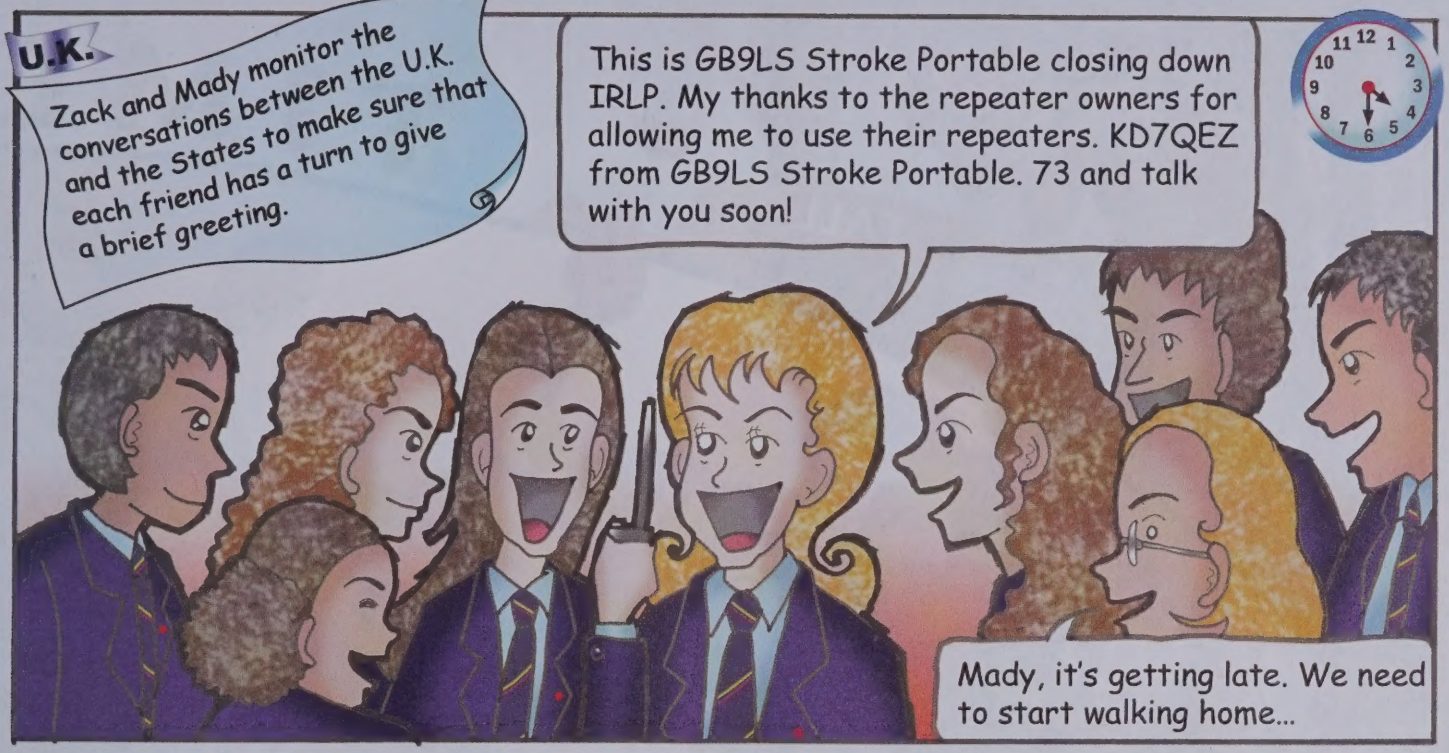

GB9LS Stroke Portable, this is KD7QEZ. Is that you Mady? Why is your call sign different?
You're full quieting**, just pause a second after you finish talking. Max misses you! Things just aren't the same without you being here.
We're having a Special Event here in the U.K. and I'm using the station's call sign! Can I get a signal report?
I miss Max too!

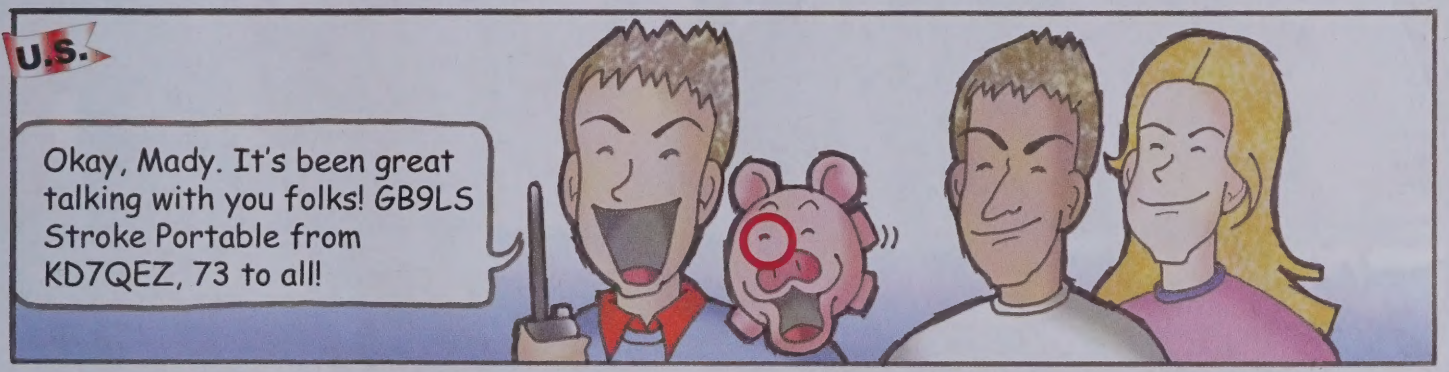
**Note below cell: "Full quieting means that the signal received was loud and clear.


U.K. Zack, we can talk third party this time because we are having a Special Event here in the U.K.. Is there anyone there who would like to try? ***
U.S. Zack, I just heard Mady, and that's a great idea, let some of the kids talk third party. Let James go first.
U.S. Hi, Mady! How are things in England?"
GB9LS Stroke Portable, this is KD7QEZ. I'm going to do third party and let James say Hello to Mady.

***For more complete information on international third party talk read: The ARRL FCC Rule Book, 13th Edition pgs 2-32 ~2-37 and visit the ARRL web site: www.arrl.org.

U.K. Hi, James, it's good to hear from you! Things are going well and I have made many friends. I am going to allow third party talk as well. I'm going to let you say "hi" to my friend Jannah. This is GB9LS Stroke Portable talking third party.
Hello, James, my name is Jannah and I'm very good friends with Mady. It's nice to talk to you. What's the weather like in Seattle?
U.S.
The weather here is cold, wet and gray. What's the weather like in England?
HA
HA
HA
U.K.
The weather here is also cold, wet and gray.


U.K.
Zack and Mady monitor the conversations between the U.K. and the States to make sure that each friend has a turn to give a brief greeting.
This is GB9LS Stroke Portable closing down IRLP. My thanks to the repeater owners for allowing me to use their repeaters. KD7QEZ from GB9LS Stroke Portable. 73 and talk with you soon!
Mady, it's getting late. We need to start walking home...


U.S.
Okay, Mady. It's been great talking with you folks! GB9LS Stroke Portable from KD7QEZ, 73 to all!

Back in the U.K.
Nov.25th
St.Catheriners' Day
SPECIAL EVENT!
GB9LS
Great job today everyone! I hope that this Special Event has inspired all of you who don't have your licenses yet to study for your tests!
Wow, this is so cool!
I can't wait to get my license!
Wow, I wish I had my license!

TIME
FALL
SUMMER
When you're

FLIES
WINTER
having FUN!
SPRING

Last Day Of School

Well students, this year has gone by so fast. Mady, all of us have really enjoyed having you visit our school.

Thank you for being so nice to me.

Talk to you soon on the radio!

Wow! I want a hamlicense!

I hope I can talk to you again on IRLP!

Sure going to miss you!

I can't wait until I get my radio!

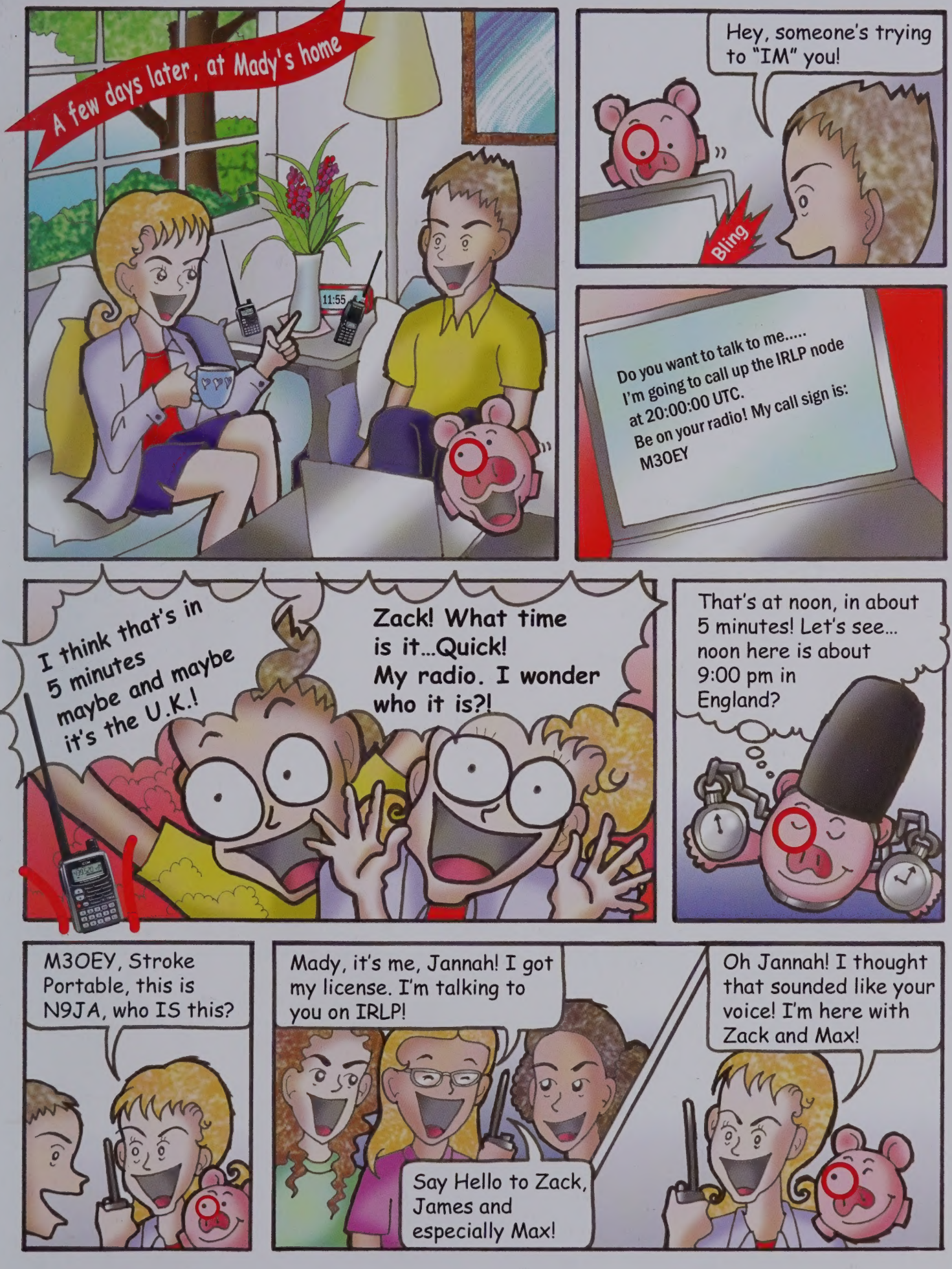
Good-bye Mady! Uncle Jim and I are going to miss having you here. Be sure to say hi to your parents for us!

Thanks for letting me stay with you! I'll miss you too! Please use your radio and talk with me as much as you can! We can even set up a special time when we can talk!

I promise! That's really a great idea, it will make you seem a lot closer!

Back in the U.S.

Not today Max, this is her travel day. I'm glad she's coming back too! It sure was great talking to her and her friends while she was away. And we'll be able to see her in a couple of days!


A few days later, at Mady's home
11:55
Hey, someone's trying to "IM" you!
Bling
Do you want to talk to me.....
I'm going to call up the IRLP node
at 20:00:00 UTC.
Be on your radio! My call sign is:
M3OEY
I think that's in 5 minutes maybe and maybe it's the U.K.!
Zack! What time is it...Quick! My radio. I wonder who it is?!
That's at noon, in about 5 minutes! Let's see... noon here is about 9:00 pm in England?
M3OEY, Stroke Portable, this is N9JA, who IS this?
Mady, it's me, Jannah! I got my license. I'm talking to you on IRLP!
Say Hello to Zack, James and especially Max!
Oh Jannah! I thought that sounded like your voice! I'm here with Zack and Max!

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